1.2 Project Objectives

This Risk-Based Disposal Approval Plan is for the removal of polychlorinated biphenyl PCB containing materials with equal to or greater than 50 parts per million (ppm) or milligram per kilogram (mg/Kg) as PCB Bulk Product Waste. All accumulated caulking waste will be disposed of as PCB Bulk Product Waste >50 mg/Kg.

Materials containing PCB equal to or greater than (≥) 50 mg/Kg include exterior caulking associated with steel window systems at steel frame to brick veneer joints. Window glazing compound contains < 50 mg/Kg associated with window systems. Metal surfaces are to be cleaned of PCB caulking including steel window frames which are to be removed and properly disposed as waste containing PCB < 50 mg/Kg after verification of complete caulking removal in accordance with Sub-Part P. The window systems are regulated in accordance with State of Connecticut Department of Energy and Environmental Protection (DEEP) due to the presence of glazing compounds with <50 mg/Kg PCB. Window caulking shall be removed for disposal as PCB Bulk Product Waste.

Adjacent porous brick veneer surfaces are considered PCB Remediation Waste containing PCB and shall be cleaned of all PCB Bulk Product caulking and shall meet clean-up standard of PCB ≤1 mg/Kg for high occupancy use structure. Post verification sampling shall be performed to verify cleaning of PCB Bulk Product in accordance with Sub-Part O. Porous brick veneer surfaces which are determined to exceed post verification sampling clean-up standards shall be encapsulated in place as PCB Remediation Waste. Non-porous surfaces (metal window frames) shall be cleaned to standard of ≤1 µg/100 cm^2 for unrestricted use and if required encapsulated surfaces shall be cleaned to standard of ≤1 µg/100 cm^2.

In accordance with State of Connecticut statutes we understand that caulking or other building materials containing PCB<50 mg/Kg but equal to or greater than 1 mg/Kg PCB are regulated and require remediation to meet DEEP requirements.

2 SITE CHARACTERIZATION

This section provides a summary of the sampling performed to delineate the nature and extent of PCBs similar to the requirements in accordance with 40 CFR Part 761.61 (a)(3)(A-C). The section includes the nature of the contamination including type of material; a summary of the procedures used to sample contaminated and adjacent surfaces; and the location and extent of the identified contaminated areas.

The following section describes the selection of sample locations, sample collection methods, and the results of the characterization data. Sampling was performed in two different phases. The initial site characterization of bulk product materials including window glazing compounds and caulking (Phase 1) was performed on November 6, 2012. Testing of adjacent surfaces to facilitate development of this Risk-Based Disposal Approval Plan (Phase 2) was performed on December 6, 2012.

All samples were collected by personnel employed by Superior Industries, LLC, (Superior) of 342 Carter Lane, Southington, CT 06489. Analysis for all samples was performed by EMSL Analytical, Inc. (EMSL) of 200 Route 130 North, Cinnaminson, NJ 08077.

Figures depicting the locations of all samples collected are included in ***Figures 2, 3*** and ***4***.

2.1 Sample Collection and Analysis

Phase 1 – Bulk Product Material Sampling

Sampling of bulk product materials was conducted by Superior representative, Simon Hoey. Refer to ***Appendix A*** for report prepared by Superior.

Sampling involved removal of bulk product materials such as window glazing compounds and caulking using hand tools to submit in bulk form to determine PCB content. Tools utilized to collect samples were disposable items and discarded after each individual sample was collected to avoid cross contamination of samples. The method included collection of multiple sub-samples and compositing as a homogenous sample to represent each area. Each sample was placed in containers, labeled and delivered to laboratory using proper chain of custody. Samples were analyzed at EMSL. The analytical method for analysis included extraction method 3540C and analysis method SW846 8082.

The sample numbers, locations, material description and analysis results are included in Table 1. Refer to ***Figure 2*** for drawing identifying locations of collected samples.

TABLE 1 - Sample Analysis Results for Bulk Products

Sample Number	Sampled Location	Analysis Parameter	Results	Reporting Limit (RL)	Units
Grey Window Glazing Compound (between glass and steel frames interior and exterior)					
1	Wampanoag Drive to north elevation – Area #1	Aroclor-1248 Aroclor-1254	2.8 2.1	0.88	mg/Kg
3	Courtyard 2 elevation – Area #6	Aroclor-1248 Aroclor-1254	1.0 0.94	0.63	mg/Kg
4	Courtyard 1 – Area #5	Aroclor-1254	5.8	0.50	mg/Kg
7	Main Street to east elevation – Area #2	Aroclor-1260	0.91	0.80	mg/Kg
9	South Elevation – Area #3	-	ND	0.50	mg/Kg
11	Cafe south elevation – Area #4	-	ND	0.95	mg/Kg
Grey/Tan Window Caulking (between steel frame and brick exterior)					
2	Wampanoag Drive to north elevation – Area #1	Aroclor-1248 Aroclor-1254	1.3 1.0	0.50	mg/Kg
5	Courtyard 1 – Area #5	Aroclor-1248 Aroclor-1254	0.74 0.68	0.50	mg/Kg

Sample Number	Sampled Location	Analysis Parameter	Results	Reporting Limit (RL)	Units
6	Courtyard 2 elevation – Area #6	Aroclor-1248 Aroclor-1254	2.1 1.8	0.65	mg/Kg
8	Main Street to east elevation – Area #2	Aroclor-1248 Aroclor-1254	1.8 2.1	0.50	mg/Kg
10	South Elevation – Area #3	Aroclor-1248 Aroclor-1254	0.81 1.2	0.49	mg/Kg
12	Cafe south elevation – Area #4	Aroclor-1254	11000	2500	mg/Kg

ND – None Detected

Analysis results and chain of custody forms are included in ***Appendix B***.

Phase 2 – Adjacent Surface Material Sampling

Sampling of adjacent surfaces was conducted by Superior representative, Simon Hoey. Refer to ***Appendix C*** for report prepared by Superior.

Bulk Sampling – Porous Substrates

Sampling of masonry was utilizing process similar to EPA "Standard Operating Procedures for Sampling Porous Surfaces for Polychlorinated Biphenyls" dated May 5, 2011. The adjacent porous surfaces included exterior brick veneer and mortar. Porous surfaces were sampled using a mechanical hammer drill to obtain samples at depths of 0.5 to 2 directly adjacent to caulking material. The bulk materials were analyzed for PCB content. Tools utilized included a dedicated drill bit to collect samples and changed between sampling locations. A plastic bag was utilized to collect material while drilling and then each sample was placed in 4 ounce glass jar, labeled and delivered to laboratory using proper chain of custody. Samples were analyzed at EMSL. The analytical method for analysis included extraction method 3540C and analysis method SW846 8082.

The sample numbers, locations, material description and analysis results are included in Table 2. Refer to ***Figure 3*** for drawing identifying locations of collected samples.

TABLE 2 - Sample Analysis Results for Porous Substrates

Sample Number	Sampled Location	Analysis Parameter	Results	Reporting Limit (RL)	Units
Brick Veneer Substrate					
PCB-1	Wampanoag Drive to north elevation – Area #1	Aroclor-1254	8.8	0.50	mg/Kg
PCB-2	Main Street to east elevation – Area #2	Aroclor-1254	8.1	0.50	mg/Kg
PCB-3	South Elevation – Area #3	Aroclor-1254	2.6	0.49	mg/Kg
PCB-4	Courtyard 1 – Area #5	-	ND	0.50	mg/Kg
PCB-5	Courtyard 2 elevation – Area #6	-	ND	0.50	mg/Kg

Sample Number	Sampled Location	Analysis Parameter	Results	Reporting Limit (RL)	Units
PCB=11	Cafe south elevation – Area #4	Aroclor-1254	27	2.5	mg/Kg

ND – None Detected

Analysis results and chain of custody forms are included in ***Appendix D***.

Perimeter Soil Sampling

Soil samples were collected at each area of the building beneath window systems. Samples were collected at distances of two inches from perimeter foundation walls and at intervals of every 10 feet for the length of elevation for each of six areas of proposed work. Samples of surface of soil were collected. Samples were composited into a single sample from each elevation. A total of six initial composite soil samples were collected.

Samples collected at the above specified intervals were collected by trowel and transferred to glass containers, labeled and delivered to laboratory using proper chain of custody. The tools utilized to collect samples were cleaned using hexane wash procedure between collecting each unique sample. Samples were analyzed at EMSL. The analytical method for analysis included extraction method 3540C and analysis method SW846 8082.

The sample numbers, locations, material description and analysis results are included in Table 3. Refer to ***Figure 4*** for drawing identifying locations of collected soil samples.

TABLE 3 - Sample Analysis Results for Soil

Sample Number	Sampled Location	Analysis Parameter	Results	Reporting Limit (RL)	Units
PCB-6	Wampanoag Drive to north elevation – Area #1	Aroclor-1254	0.068	0.0620	mg/Kg
PCB-7	Main Street to east elevation – Area #2	-	ND	0.0610	mg/Kg
PCB-8	South Elevation – Area #3	Aroclor-1254	0.074	0.060	mg/Kg
PCB-9	Courtyard 1 – Area #5	-	ND	0.0630	mg/Kg
PCB-10	Courtyard 2 elevation – Area #6	-	ND	0.0620	mg/Kg
PCB=12	Cafe south elevation – Area #4	-	ND	0.0760	mg/Kg

ND – None Detected

Analysis results and chain of custody forms are included in ***Appendix D***.

2.2 Sample Analysis Results Summary

The following Table 4 summarizes the specific sampling locations of collected samples and results of PCB analysis. The analytical method for analysis included extraction method

3540C (Soxhlet Extraction) and analysis method SW846 8082. The laboratory results and chain of custody are included in Appendices.

TABLE 4 – Results Summary by Area

Sampled Location	Grey Window Glazing Compound (mg/Kg)	Grey/Tan Window Caulking (mg/Kg)	Brick Veneer Substrate (mg/Kg)	Soil (mg/Kg)
Wampanoag Drive to north elevation – Area #1	4.9	2.3	8.8	0.068
Main Street to east elevation – Area #2	0.91	3.9	8.1	ND
South Elevation – Area #3	ND	2.01	2.6	0.074
Cafe south elevation – Area #4	ND	11000	27	ND
Courtyard 1 – Area #5	5.8	1.42	ND	ND
Courtyard 2 elevation – Area #6	1.94	3.9	ND	ND

ND – None Detected

2.3 Remediation Requirements

Based on the results of sampling conducted at the site to characterize PCB Bulk Product Waste and PCB Remediation Wastes, we have identified the proposed methods for PCB Remediation at the Northwest Catholic School.

1. **Grey Window Glazing Compound** – Results of samples collected for glazing compound ranged from ND to 5.8 mg/Kg. Material is considered an original application associated with steel window frames and glass. Material is present on both interior and exterior side of glass. There is no history of renovation or work involving the window glazing compound. Results are < 50 mg/Kg and material meets the definition of an Excluded PCB Product in accordance with 40 CFR 761.3. Material is considered a regulated PCB product per Connecticut DEEP statutes.
2. **Grey/Tan Window Caulking** – Results for five of six samples collected for window caulking ranged from 1.42 to 3.8 mg/Kg. One sample of caulking at the Café south elevation contained 11,000 mg/Kg. Material for all six samples was observed to be visually homogenous at the time of sampling. Material is considered an original application associated with exterior joint between steel window frames and brick. There is no known history of renovation or work involving the window caulking. Results of five of the samples are < 50 mg/Kg. Substrate sampling was conducted at all six caulking locations previously tested. With the exception of the samples within two Courtyards, the other three locations where caulking is < 50 mg/Kg samples identified PCBs at levels which are higher than the caulking. This indicates the potential that an original source of PCB Bulk Product >50 mg/Kg was likely present. We conclude that the caulking materials **do not meet** the definition of an Excluded PCB Product in accordance with 40 CFR 761.3. Material is considered a regulated PCB product per EPA regulation 40 CFR 761. All caulking materials at joints between brick veneer and steel windows shall be treated as PCB Bulk Product Waste >50 mg/Kg and properly disposed of in accordance with 40 CFR 761.62 (b).

3. **Non-porous Steel Window Frames** – Steel window frames in contact with PCB Bulk Product caulking are non-porous. Caulking shall be completely removed to visual standard of no visible caulking. Upon completion, wipe samples shall be conducted on steel frames in accordance with Sub-Part P to verify cleaned to meet unrestricted use of $\leq$1 µg/100 cm^2 for disposal or recycling of the steel as clean waste.
4. **Porous Brick Veneer** – Brick veneer in contact with PCB Bulk Product caulking is porous. Initial limited sampling has identified surfaces which exceed clean-up standards for PCB Remediation Waste $\leq$1 mg/Kg. Caulking shall be completely removed to visual standard of no visible caulking. Upon completion, post verification bulk samples shall be conducted of brick veneer in accordance with Sub-Part O to verify cleaned to meet unrestricted use of $\leq$1 mg/Kg. Locations where it is determined that clean-up standards exceed 1 mg/Kg shall be encapsulated and not removed. Surfaces requiring encapsulation shall be treated in place with a product to seal surfaces and verified clean to meet standard of cleaned to standard of $\leq$1 µg/100 cm^2. Sampling frequency for wipe sampling of encapsulated surfaces shall be in accordance with Sub-Part P.
5. **Soil** – Soil sampling conducted during site characterization for PCB Remediation Waste identified no areas which exceed clean-up standards of $\leq$1 mg/Kg. The required work shall be conducted using protections of ground surfaces and upon completion of all exterior work to remove PCB Bulk Products, soil sampling shall be conducted to ensure no contamination of existing soil. Soil sampling shall be performed at a frequency consistent with Sub-Part N for pre-characterization of CPB Remediation Waste for verification.

3 REMEDIATION PLAN

The work described in this Risk-Based Disposal Approval Plan shall meet the objectives identified in section 1.2 Project Objectives in accordance with 40 CFR Part 761. The remediation work shall be performed to ensure compliance with EPA Toxic Substance Control Act (TSCA) requirements and protect both public health and the environment. Materials classified as PCB Bulk Product Waste and Bulk PCB Remediation Waste shall be properly disposed or treated in compliance with federal and state regulatory requirements. Refer to ***Figure 5*** for locations requiring PCB abatement.

The proposed abatement activities to be performed by Remediation Contractor shall include the following:

1. Site preparation and controls to facilitate remediation of PCBs.
2. Health and Safety in accordance with Occupation Safety and Health Administration (OSHA) requirements.
3. Recordkeeping and distribution as required in accordance with 40 CFR part 761.125 (c)(5).

PCB ABATEMENT REQUIRMENTS

PCB Bulk Product Waste Removal

PCB-01 – Remove existing exterior caulking at jamb locations from sill to head at all masonry openings for disposal as PCB Bulk Product Waste> 50 mg/Kg. caulking shall be removed from brick veneer and steel window frames to no visible material remaining. Waste shall be disposed of in accordance with 40 CFR 761.62 (b).

Bulk PCB Remediation Waste

PCB-02 – PCB Remediation Waste shall include brick veneer in contact with PCB Bulk Product Waste at jambs. Clean-up standards shall meet requirement of ≤ 1 mg/Kg for high occupancy use building. If post verification sampling determines clean-up standards are not met, the surface of jambs in contact with caulking to a minimum distance of 3 inches from caulk joint shall be encapsulated with sealant coating. Post verification wipe sampling shall be conducted to document surface of encapsulant meets established wipe sample criteria established herein.

Window Systems – PCB <50 mg/Kg

PCB-03 – Remove existing window systems with PCB containing glazing compound. Material contains <50 mg/Kg PCB. Entire window systems shall be removed intact to the extent feasible and disposed of as waste containing PCBs <50 mg/Kg. This activity is not subject to requirements of 40 CFR 761, however is to be conducted to satisfy the guidance provided by CT DEEP. Any waste materials containing PCBs $\geq$ 1 mg/Kg are regulated for disposal in CT and waste must be disposed of at an out of state facility permitted to accept waste containing < 50 mg/KG PCB.

Remediation activities to be performed by others shall include the following:

1. Monitoring remediation activities as Owner's representative shall be performed by Superior Industries, LLC.
2. Collection of verification and soil samples in accordance with Sup-parts N, P and O in accordance with 40 CRF Part 761 for PCB analysis shall be performed by Owner's Representative, Superior Industries, LLC.

Prior to abatement and remediation activities, site preparation and controls shall be established. PCB Bulk Product Waste will be removed and transported off-site for disposal in a facility permitted, licensed, or registered by a State as a municipal or non-municipal non-hazardous waste landfill for PCB waste $\geq$50 mg/KG or ppm. PCB Bulk Product Waste shall be removed and properly disposed in accordance with 40 CFR Part 761.62 (b).

Materials containing <50 ppm will be transported to a solid waste disposal facility not within the State of Connecticut.

Bulk PCB Remediation Waste shall be treated in accordance with Risk-Based Disposal Approval Plan requirements in accordance with 40 CFR Part 761.61(c) and special requirements or conditions of approval per EPA in response to this prepared plan.

3.1 Abatement Area Preparation and Controls

The work shall be performed in accordance with this Risk-Based Disposal Approval Plan. Prior to initiating PCB Removal the following abatement areas preparations and control procedures will be implemented.

1. The Remediation Contractor shall prepare a site specific work plan as as typically required as a condition of approval from EPA and acknowledge receipt and understanding of this Risk-Based Disposal Approval Plan and conditions of EPA approval to proceed with work.

2. The Remediation Contractor shall prepare a Health & Safety Plan (HASP) developed specific to the site and work activities to be performed. All workers shall follow applicable federal and state regulation with regard to work activities, including but not limited to OSHA regulation including personal protection and respiratory protection requirements.

3. Post warning signs in accordance with 29 CFR 1910.1200 at all approaches to the work area. Signs shall be conspicuously posted to permit a person to read signs and take precautionary measures to avoid exposure to PCBs or other Toxic or Hazardous Substances. These signs should include the PCB ML markers at each entrance to the work area.

4. During all remediation activities, the Remediation Contractor shall maintain control of all entrances and exits to the project site to ensure only authorized personnel enter the work areas and are afforded proper personal protective equipment and as required including respiratory protection. All approaches to work areas shall be demarcated with appropriately worded warning signs.

5. Ground protection to prevent debris from escaping the work area and to protect areas outside of abatement from PCB contamination shall be utilized. Protection shall include the use of water impervious membrane covering which shall be secured to the ground surface. Edges shall be raised to prevent water run-off used for dust control during cutting and demolition of structures. The membrane shall be covered with a single layer of 6-mil polyethylene sheeting securely fastened to foundation.

6. Isolation barriers shall be installed on interior side of window systems to isolate these systems to the building exterior where work shall be performed. Protection shall include two layers of 6-mil polyethylene sheeting securely affixed to the inside finish surfaces of walls to isolate window systems to the building exterior.

7. Isolation barriers shall be installed on exterior side of window systems to contain these systems where work shall be performed to minimize dispersal of dust and debris during caulking removal. Protection shall include one layer of 6-mil polyethylene sheeting securely affixed to the exterior side finish surfaces.

8. All other openings to the building interior such as unit ventilation, ducts, and grilles shall be securely sealed with a single layer of 6-mil polyethylene sheeting from the building exterior.

9. Ground protection and isolation barriers shall remain in place throughout work to collect dust and debris resulting from PCB Bulk Product Waste removal.

10. All debris generated during operations including but not limited to visible caulking, dust and debris shall be HEPA vacuumed continuously throughout the work shift and at the end of a work shift to avoid accumulation.

11. Any tears or rips that occur in protections shall be repaired or removed and replaced with new protections.

12. It is anticipated that to facilitate the work movable staging or lifts may be utilized to access window systems. Wind screens consisting of 6-mil polyethylene sheeting shall be applied to staging or lift to prevent dispersal of dust and debris beyond the work area. Platforms shall also be protected as appropriate to facilitate cleaning of dust and debris but not introduce trip or slip hazards.

13. All equipment utilized to perform cutting, or demolition of adjacent materials shall be equipped with appropriate dust collection systems.

14. All surfaces adjacent to materials removed shall be properly decontaminated upon completing the removal of PCB Bulk Product Waste. All visible dust shall be removed using HEPA vacuums and wet cleaning methods with solvent or other acceptable cleaning products.

15. Appropriate PCB waste containers shall be placed adjacent to abatement zones. Containers shall be lined covered and secured. The PCB waste containers shall be properly marked as described in 40 CFR part 761.40 and 761.45.

3.2 Decontamination Area and Procedures

1. Post warning signs in accordance with 29 CFR 1910.1200 at all approaches to the work area. Signs shall be conspicuously posted to permit a person to read signs and take precautionary measures to avoid exposure to PCBs or other Toxic or Hazardous Substances. These signs should include the PCB M_L markers at each entrance to the work area.

2. The Remediation Contractor shall establish in a remote location to the work area, a decontamination unit consisting of equipment room, shower room, and clean

room in series. The Remediation Contractor shall ensure that employees enter and exit the decontamination unit.

3. Equipment room. The equipment room shall be supplied with impermeable, labeled bags and containers for the containment and disposal of contaminated protective equipment.

4. Shower area. Shower facilities shall be provided which comply with 29 CFR 1910.141(d)(3). The showers shall be adjacent both to the equipment room and the clean room.

5. Clean change room. The clean room shall be equipped with a locker or appropriate storage container for each worker's use. Following showering, each worker must then change into street clothing in clean change areas.

6. Equipment Room for Waste Removal: The Remediation Contractor shall establish a two chamber equipment room or area that is adjacent to each work area for the decontamination of waste containers and equipment.

    a. The area must be of sufficient size as to accommodate cleaning of equipment and removing waste without spreading contamination beyond the work area (as determined by visible accumulations).
    b. All equipment and surfaces of containers filled with PCB waste must be cleaned prior to removing them from the equipment room or work area.

3.3 Cleaning and Decontamination Procedures

1. The Remediation Contractor shall be responsible for complete cleaning and decontamination of the work area upon completion of work. The work area will be required to meet proposed Verification Sampling limits established herein.

2. The Remediation Contractor shall utilize HEPA vacuum and wet cleaning products to remove all visible dust and debris from all surfaces within the work area. If specialty products are utilized the Remediation Contractor shall utilize in accordance with manufacturer's specifications including any additional safety and disposal requirements for such use.

3. Cleaning of containment barriers shall be performed leaving critical barriers at openings in place until results of post verification sampling indicate acceptable limits. Cleaning shall be performed from ceiling to floors.

4. Any liquid used to wet the dust and debris to control fugitive emissions shall be collected and decontaminated in accordance with 40 CFR Part 761.79 (b)(1) or disposed of in accordance with 761.60 (a).

5. All rags and other cleaning materials used to clean shall also be properly disposed as PCB Remediation Waste. All PCB Remediation Waste shall be stored for disposal

in accordance with 40 CFR Part 761.61(a)(5)(v)(A). All waste containers shall be appropriately marked in accordance with 40 CFR Part 761.40 and 761.45.

6. Equipment to be utilized in connection with the removal of PCB Bulk Product Waste including waste collection or that will or may come in direct contact with the site contaminants shall be decontaminated prior to leaving the site to prevent migration of the contaminated residues from the project site. Decontamination shall be in accordance with 40 CFR Part 761.79 and Sub-part S procedures.

7. All non-disposable equipment and tools used in the course of the project will be decontaminated at the conclusion of each work day through the following sequence:
    a. Initial tap water rinse, to remove gross soil
    b. Hexane or equivalent wash
    c. Tap water rinse
    d. Second Hexane or equivalent wash
    e. Second tap water rinse

8. The wash water and decontamination liquids shall be captured and containerized in DOT approved 55-gallon barrels for off-site disposal.

3.4 Removal Procedures

The following removal procedures shall be utilized to conduct removal of PCB Bulk Product Waste.

PCB Bulk Product Waste Materials

PCB Bulk Product Waste Materials including PCB caulking shall be removed from specified locations for proper disposal. Materials shall be removed in a manner which does not breakdown the materials into fine dust or powder to the extent feasible. Equipment and tools to be utilized shall include hand tools and mechanical equipment such as demolition hammers to remove materials from adjacent substrates. Mechanical removal equipment shall as appropriate be fitted with dust collection systems. Any dry or brittle caulking or materials or other PCB Bulk Product waste shall be removed with additional engineering controls such as use of a HEPA vacuum to remove accumulated dust or debris during removal. Once removed, materials shall be placed in lined containers or into appropriate temporary containers such as 6-mil polyethylene disposal bags for controlled transport to PCB waste containers at the end of each work shift. PCB Bulk Product Waste shall be stored for disposal in accordance with 40 CFR 761.65 and marked in accordance with 40 CFR Part 761.40 and 761.45.

Encapsulation of Bulk PCB Remediation Waste

The proposed encapsulant to be utilized shall include two component epoxy primer resin coating with an aliphatic polyurethane top coat such as Sikagard 62 & Sikalastic 735AL or, equivalent. Encapsulant shall be applied in accordance with manufacturer's recommendations. MSDS sheets shall be maintained and storage and disposal requirements

shall be adhered to according to the MSDS. Encapsulant shall be applied if it is determined that contamination of porous brick veneer cannot be effectively cleaned to meet clean-up goal of ≤ 1 mg/Kg to caulk joint locations following the removal of all caulking and verification testing to verify clean-up standards are met or exceeded. Prior to encapsulation a visual inspection shall be performed. This visual inspection shall document the removal of caulking and cleaning of substrate. Encapsulant shall be applied to surfaces, at a distance from either side of caulk joint onto substrate and to the full depth of joints as determined by post verification sampling and analysis but not less than 3 inches from where caulking was removed.

Window Systems with Glazing Compounds <50ppm

Remove existing window systems with PCB containing glazing compound. Material contains <50 mg/Kg PCB. Entire window systems shall be removed intact to the extent feasible and disposed of as waste containing PCBs <50 mg/Kg. This activity is not subject to requirements of 40 CFR 761, however is to be conducted to satisfy the guidance provided by CT DEEP. Any waste materials containing PCBs ≥ 1 mg/Kg are regulated for disposal in CT and waste must be disposed of at an out of state facility permitted to accept waste containing < 50 mg/KG PCB. Once removed, materials shall be placed in lined containers or into appropriate temporary containers such as 6-mil polyethylene disposal bags for controlled transport to PCB waste containers at the end of each work shift. Materials containing <50 ppm shall be stored for disposal.

3.5 Verification Sampling Plan

Following the completion of the PCB Bulk Product Waste removal Superior Industries, LLC, shall implement the following verification sampling plan.

Upon completion of work in each area, a visual inspection of all remediated surfaces shall be conducted for visible evidence of dust, debris and liquids. Surfaces shall also be inspected for visible PCB Bulk Product materials that may not have been removed. The visual inspection shall provide in a preliminary way, verification that remediation work has been completed in accordance with this plan. Visual inspection shall ensure that no PCB Bulk Product Waste, visible dust, debris or liquids are present on adjacent surfaces. In addition to the remediation surfaces, the surfaces of protective coverings and isolation barriers shall be inspected to ensure they are cleaned of dust and debris. No sampling shall be performed until the visual inspection is complete and all surfaces are visually free of dust, debris and in the work area.

Porous Brick Veneer Surfaces

Porous brick veneer surfaces shall be evaluated to verify that removal of PCB Bulk product Waste has resulted in surfaces with ≤1 mg/Kg for unrestricted use for a high occupancy use building. Superior Industries, LLC shall follow the EPA "Standard Operating Procedures for Sampling Porous Surfaces for Polychlorinated Biphenyls" Dated May 5, 2011, to collect verification samples. **Sampling is proposed at frequency meeting Sub-part O for all vertical jambs where caulking is in contact with porous brick.** Based on the anticipated linear length of 186 linear feet of caulking which is an estimated 186 linear feet of contact

point with porous brick veneer and the above frequency it is proposed that **40 (divide LF by 5 feet) samples plus two duplicate samples** will be collected.

Results of analysis shall be compared to the clearance objective established herein. If any location exceeds this clearance objective, encapsulant will be utilized and upon installation wipe sample verification will be conducted at the same frequency proposed herein.

Non-Porous Steel Surfaces

The vertical surface at jambs of windows in contact with caulking shall be cleaned and wipe sampling shall be performed upon completion of all work. Wipe samples shall be collected from the surfaces in accordance with Sub-part P of 40 CFR Part 761 as verification of cleaning. There is an estimated 258 linear feet of caulking in contact with the steel windows. Based on the anticipated linear length it is proposed that **52 (divide LF by 5 feet) samples plus two duplicate samples** will be collected.

Wipe sampling of non-porous steel shall be performed in accordance with Sub-part P and compared to high occupancy standard for non-porous surfaces of $\leq$1 ug/100cm^2. Areas which exceed the cleaning standard shall be re-cleaned and resampled until surfaces meet clean-up standard.

Encapsulated Surfaces

Substrate testing of porous brick veneer has been performed in limited representative locations where caulking is to be removed. The locations were sampled at location of sampled caulking and a core sample collected directly adjacent to caulk joint to determine existing concentrations of PCBs in substrates. The result indicated contamination in several locations above clean-up standard of $\leq$1 mg/Kg for unrestricted use for a high occupancy use building. It is therefore anticipated that encapsulation may be required.

Cleaning with solvent will likely not be sufficient to meet clean-up standards for the porous brick veneer. However, verification sampling of substrates will be performed to confirm initial findings and only those surfaces that exceed clean-up standards will be encapsulated.

After removal of the PCB Bulk Product (caulking), and application of the encapsulant, post encapsulation wipe samples shall be performed, and the PCB Remediation Wastes will be considered to have been appropriately sealed when all verification samples are < 1ug/100cm^2.

The purpose of wipe sample verification is the evaluation of the effectiveness of the encapsulant only. The proposed frequency of wipe verification samples is proposed at one sample per 10 linear feet of encapsulated joint with a minimum of one sample per vertical jamb. **It is estimated that a maximum of 21 samples (divide LF by 10 feet) plus 2 duplicate wipe samples will be required.**

The laboratory shall be an accredited laboratory for PCB analysis. The analysis method shall include extraction using EPA Method 3540C (Soxhlet Extraction) and analysis method SW846 8082.

Soil

Initial limited composite soil testing from each of the six work area locations has indicated soil levels do not exceed clean-up standards for high occupancy use building. Following the completion of the PCB Bulk Product and removal of PCB containing window systems, post remediation soil samples shall be collected in accordance with Sub-part N.

Samples collected at the above specified intervals shall be collected by trowel or hand auger, and transferred to glass containers, labeled and delivered to laboratory using proper chain of custody. Samples will be preserved using ice during transport to laboratory. The tools utilized to collect samples shall be cleaned using hexane wash procedures between each sampling location.

The results of the samples shall be compared to pre-remediation samples collected in the same locations. Should results indicate samples at or exceeding 1 mg/Kg, the Remediation Contractor shall be responsible for excavation of contaminated soil to meet established clean-up goals. Results of analysis shall be compared to the clearance objective which for unrestricted use of soil shall be ≤1 mg/Kg. If any location exceeds this clearance objective, l removal of soil will be conducted and verification process conducted in accordance with Sub-Part O.

Interior Window or Floor Surfaces

The removal of window systems containing exterior and interior glazing compound with PCB <50 mg/Kg shall be performed. Window systems will be isolated to the building exterior with containment prior to conducting removal of systems. All window systems including frames, glass, panels, metal columns and all caulking and glazing compounds will be removed from the exterior of the building. Upon completion of the work and subsequent cleaning of the containment barriers, the barriers shall be removed and the finish floor surfaces cleaned. Once cleaned, Superior Industries, LLC shall collect wipe samples for verification of cleaning. Wipe sampling methods for non-porous floors or window sills shall be performed using method specified in Sub-part P and compared to standards required by the State of Connecticut Department of Public Health and EPA recommended limit of ≤1 ug/100cm$^{2.}$

The Building where work is required has six work areas where window systems are to be removed with PCB materials <50 ppm. Samples shall be collected on the floor in area of containment once containment is cleaned and removed to verify cleaning. In addition a second wipe sample shall be collected from within 2 feet of containment to verify the effectiveness of the containment barriers to prohibit migration of PCB from the containment area. A total of 70 samples (determine number of 35 rooms and assume 2 samples per rom) for verification shall be collected along with 1 blank sample per 20 samples collected and 5% duplicate samples for an additional 8 samples. .

The laboratory for all collected samples shall be an accredited laboratory for PCB analysis. The analysis method shall include extraction using EPA Method 3540C (Soxhlet Extraction) and analysis method SW846 8082.

4 SCHEDULE AND PLAN CERTIFICATION

It is the intent of the Owner Northwest Catholic Schools to begin the removal of PCB Bulk Product Materials during proposed construction in June 2013 completing all work in July of 2013 in accordance with this Risk-Based Disposal Approval Plan.

It is anticipated that the work shall be performed as expeditiously as possible including removal of PCB Bulk Product Waste followed by the encapsulation of Bulk PCB Remediation Waste from adjacent surfaces. Upon confirming the Project Objectives are met, the installation of new window systems shall commence.

It shall be required that removal of PCB Bulk Product Waste occurs prior to any disturbance as a result of planned renovation work. **No PCB Abatement work shall be performed while school is in session. Any PCB Abatement work shall be coordinated and scheduled during school vacations.**

The Owner hereby certifies that all the sampling plans, sample collection procedures, sample preparation procedures, extraction procedures and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination at the cleanup site, are on file at the School and available for EPA inspection.

BRENDAN CANNY _____ 3/4/13.

Owner's Representative _____ Date

_____, Business Manager

_____ 3/4/13.

Superior Industries, LLC Representative _____ Date

Earl Clark

_____ _____

Remediation Contractor Representative _____ Date

To be determined

FIGURES

APPENDIX A

Superior Industries, LLC. Report
PCB Caulking & Glazing Sampling – December 6, 2012